Claims

We claim:

1. A method of induction of amyloid plaques, the method comprising the steps of:
   a) immobilizing a quantity of a selected sulfated glycosaminoglycan (SGAG) or a GAG-related macromolecule on a selected medium;
   b) adding to the immobilized SGAG on the medium a quantity of dissolved low fibrillar Aβ 1-40 (LFAβ).

2. The method of Claim 1, wherein the LFAβ is added in a Aβ:SGAG weight/weight (w/w) ratio range of between 1:0.01 to 1:20.

3. The method of Claim 2, wherein the LFAβ is added in a Aβ:SGAG w/w ratio range of between 1:0.1 to 1:10.

4. The method of Claim 3, wherein the LFAβ is added in a Aβ:SGAG w/w ratio range of between 1:0.5 to 1:2.

5. The method of Claim 4, wherein the LFAβ is added in a Aβ:SGAG w/w ratio of about 1:1.

6. The method of Claim 1, wherein the selected medium is either a slide, a film or a titer well plate.

7. The method of Claim 1, wherein the SGAG is selected from the group of SGAGs consisting of heparin, heparan sulfate, keratan sulfate, dermatan sulfate, chondroitin-4-sulfate and chondroitin-6-sulfate, and the GAG-related macromolecule is dextran sulfate.

8. The method of Claim 6, wherein the titer well plate is an 18 - 96 well Teflon partitioned slide.

9. The method of Claim 8, wherein the LFAβ is added to the immobilized SGAG by a bubbling technique.

10. A method of induction of amyloid plaques, the method comprising the steps of:
   a) immobilizing a quantity of a sulfated glycosaminoglycan (SGAG) or a GAG-related macromolecule on a Teflon partitioned slide well, the SGAG selected from the group of SGAGs consisting of heparin, heparan sulfate, keratan sulfate, dermatan sulfate, chondroitin-4-sulfate and chondroitin-6-sulfate, and the GAG-related macromolecule is dextran sulfate;
   b) adding to the immobilized SGAG on the slide well a quantity of dissolved low fibrillar Aβ 1-40 (LFAβ), wherein the LFAβ is added in a

Aβ:SGAG w/w ratio range of between 1:0.5 to 1:2 by bubbling the LFAβ into the slide well.

11. A method of screening a selected amyloid therapeutic candidate, the method comprising the steps of:

a) immobilizing a quantity of a selected sulfated glycosaminoglycan (SGAG) or a GAG-related macromolecule on a selected medium;

b) adding to a quantity of dissolved low fibrillar Aβ 1-40 (LFAβ) a selected quantity of the selected amyloid therapeutic candidate to create a test solution;

c) adding to the immobilized SGAG on the medium a selected quantity of the test solution;

whereby a percentage inhibition in formation of amyloid plaques, as compared to a test reference prepared as above without the selected amyloid therapeutic candidate, is indicative of a percentage efficacy of the selected amyloid therapeutic candidate.

12. The method of Claim 11, wherein the test solution is added having LFAβ in a Aβ:SGAG weight/weight (w/w) ratio range of between 1:0.01 to 1:20.

13. The method of Claim 12, wherein the test solution is added having LFAβ in a Aβ:SGAG w/w ratio range of between 1:0.1 to 1:10.

14. The method of Claim 13, wherein the test solution is added having LFAβ in a Aβ:SGAG w/w ratio range of between 1:0.5 to 1:2.

15. The method of Claim 14, wherein the test solution is added having LFAβ in a Aβ:SGAG w/w ratio of about 1:1.

16. The method of Claim 11, wherein the selected medium is either a slide, a film or a titer well plate.

17. The method of Claim 11, wherein the SGAG is selected from the group of SGAGs consisting of heparin, heparan sulfate, keratan sulfate, dermatan sulfate, chondroitin-4-sulfate and chondroitin-6-sulfate, and the GAG-related macromolecule is dextran sulfate.

18. The method of Claim 16, wherein the titer well plate is an 18 - 96 well Teflon partitioned slide.

19. The method of Claim 18, wherein the test solution is added to the immobilized SGAG by a bubbling technique.

20. A method of screening a selected amyloid therapeutic candidate, the method comprising the steps of:

a) immobilizing a quantity of a sulfated glycosaminoglycan (SGAG) or a GAG-related macromolecule on a Teflon partitioned slide well, the SGAG selected from the group of SGAGs consisting of heparin, heparan sulfate, keratan sulfate, dermatan sulfate, chondroitin-4-sulfate and chondroitin-6-sulfate, and the GAG-related macromolecule is dextran sulfate;

b) adding to a quantity of dissolved low fibrillar Aβ 1-40 (LFAβ), wherein the LFAβ is added in a Aβ:SGAG w/w ratio range of between 1:0.5 to 1:2, a selected quantity of the selected amyloid therapeutic candidate to create a test solution;

c) adding to the immobilized SGAG on the medium a selected quantity of the test solution by bubbling it into the slide well;

whereby a percentage inhibition in formation of amyloid plaques, as compared to a test reference prepared as above without the selected amyloid therapeutic candidate, is indicative of a percentage efficacy of the selected amyloid therapeutic candidate.

21. A method of screening a selected amyloid therapeutic candidate, the method comprising the steps of:

a) immobilizing a quantity of a selected sulfated glycosaminoglycan (SGAG) or a GAG-related macromolecule on a selected medium;

b) adding to the immobilized SGAG on the medium a selected quantity of dissolved low fibrillar Aβ 1-40 (LFAβ) to form amyloid plaques on the medium;

c) adding to the amyloid plaques on the medium a selected quantity of a test solution of a selected amyloid therapeutic candidate;

whereby a percentage disruption of amyloid plaques on the medium, as compared to a test reference prepared as above without the selected amyloid therapeutic candidate, is indicative of a percentage efficacy of the selected amyloid therapeutic candidate.

22. The method of Claim 21, wherein the LFAβ is added in a Aβ:SGAG weight/weight (w/w) ratio range of between 1:0.01 to 1:20.

23. The method of Claim 22, wherein the LFAβ is added in a Aβ:SGAG w/w ratio range of between 1:0.1 to 1:10.

24. The method of Claim 23, wherein the LFAβ is added in a Aβ:SGAG w/w ratio range of between 1:0.5 to 1:2.

25. The method of Claim 24, wherein the LFAβ is added in a Aβ:SGAG w/w ratio of about 1:1.

26. The method of Claim 21, wherein the selected medium is either a slide, a film or a titer well plate.

27. The method of Claim 21, wherein the SGAG is selected from the group of SGAGs consisting of heparin, heparan sulfate, keratan sulfate, dermatan sulfate, chondroitin-4-sulfate and chondroitin-6-sulfate, and the GAG-related macromolecule is dextran sulfate.

28. The method of Claim 26, wherein the titer well plate is an 18 - 96 well Teflon partitioned slide.

29. The method of Claim 28, wherein the LFAβ is added to the immobilized SGAG by a bubbling technique.

30. A method of screening a selected amyloid therapeutic candidate, the method comprising the steps of:

a) immobilizing a quantity of a sulfated glycosaminoglycan (SGAG) or a GAG-related macromolecule on a Teflon partitioned slide well, the SGAG selected from the group of SGAGs consisting of heparin, heparan sulfate, keratan sulfate, dermatan sulfate, chondroitin-4-sulfate and chondroitin-6-sulfate, and the GAG-related macromolecule is dextran sulfate;

b) adding to the immobilized SGAG on the slide well a quantity of dissolved low fibrillar Aβ 1-40 (LFAβ), wherein the LFAβ is added in a Aβ:SGAG w/w ratio range of between 1:0.5 to 1:2 by bubbling the LFAβ into the slide well.

c) adding to the amyloid plaques on the slide well a selected quantity of a test solution of a selected amyloid therapeutic candidate;

whereby a percentage disruption of amyloid plaques on the slide well, as compared to a test reference prepared as above without the selected amyloid therapeutic candidate, is indicative of a percentage efficacy of the selected amyloid therapeutic candidate.

31. A kit for screening a selected amyloid therapeutic candidate, the kit comprising: an immobilized quantity of a sulfated glycosaminoglycan (SGAG) on a medium; a quantity of low fibrillar Aβ 1-40 (LFAβ); and screening instructions per Claim 11.

32. A kit for screening a selected amyloid therapeutic candidate, the kit comprising: a quantity of amyloid plaques preformed on a medium in accordance with Claim 21 steps a-b; and screening instructions per Claim 21 step c, *et seq*.